

guished from them by its exceeding fragility as well as by the circumstance of the inflations being formed by two cells instead of one, as is the case with all other Vesiculasperms.

This is by no means an uncommon species, although it is rare to find it with inflated cells. It appears to prefer pure water, for it is usually met with in ditches in which the water glides slowly along.

Cheshunt marshes; Stevenston, Ayrshire, Rev. D. Landsborough.

Accurate figures, many of them coloured, have been preserved of the whole of the species above described.

## PROCEEDINGS OF LEARNED SOCIETIES.

### ZOOLOGICAL SOCIETY.

Jan. 11, 1842.—William Yarrell, Esq., Vice-President, in the Chair.

A letter from the Society's corresponding member, H. J. Ross, Esq., was read, in which he states that the Common Green Woodpecker of Europe (*Picus viridis*, Auct.) is to be found in great numbers at Trebizond, and that he has shot them as high as Gumushkhaugh, which is between Erzeroum and Trebizond.

M. P. Gervais exhibited a drawing representing the details of a new genus of Marsupial animals, and communicated to the Meeting, in his own name and that of M. Jules Verreaux, the description of this new Mammal, which formed part of a collection brought from Swan River, and, in the opinion of the authors of the paper, will constitute among the *Marsupialia* the type of a distinct family, for which these naturalists propose the name *Tarsipedidæ*, and for the species the name of *Tarsipes rostratus*.

In general appearance, observe the authors, the *Tarsipes rostratus* bears some resemblance to a Shrew (*Sorex*); but the head is longer, and the muzzle is much elongated. The head and body together measure  $4\frac{1}{2}$  French inches, and the tail  $3\frac{1}{2}$  inches. The fur is tolerably dense, and composed of shortish silky adpressed hairs, which are of a slate-grey colour next the skin, and yellowish externally. The back is of a brownish yellow colour, and a dorsal black stripe extends from the shoulders to the base of the tail, and on each side of this stripe the fur assumes a paler hue: the upper part of the head and muzzle are of the same brownish colour as the back; the under side of the body as well as the inner side of the limbs are yellowish; the hairs of the moustaches are brown, and tolerably long, some about one inch in length. The muzzle is terminated by a little *muflé*; the nostrils are laterally pierced and virguliform; the inter-nasal furrow is nearly equal in length to the nostrils. The tail is furnished at the base with fur like that of the body, but the greater portion is covered with short hairs, as in the rat tribe: its extremity is naked beneath, but the naked portion is but a few lines in length. The ears are tolerably short, somewhat rounded, and may be compared to those of the Shrews.

The animal is plantigrade; its hinder limbs are rather longer than those in front. The palm of the hand is naked, as well as that of the foot, which is rather narrow and somewhat elongated, as in certain climbing Mammals. The fore-feet are provided with five toes, which are free, moderately short, and naked beneath as well as the part above, on the ungueal phalanx of which the digital pad is large, and forms a little cushion, as in the fingers of the *Lemuridæ* which are provided with three pairs of mammæ (*Tarsius*, *Galago*, and *Cheirogale*): the thumb has the same direction as the other fingers, and like them it has a little depressed nail, which covers but a small portion of the apical fleshy pad. The middle finger is the largest, the fingers joining it are nearly equal in length, and the thumb is rather shorter than the outer finger.

The principal peculiarities in the hinder limbs consist in the smallness of the middle toe and that next it on the inner side, and these toes are united as far as the last phalanx, as in the Syndactyle *Marsupialia*, and like these animals, are provided each with a pointed nail bearing some resemblance to a little hoof. The thumb is opposeable to the other toes, has no nail, but terminated by a fleshy pad: the fourth and fifth toes are provided with a pad similar to that of the corresponding toes of the fore-feet; they have moreover small depressed nails, which do not extend to the outer margins of the pad: the fourth toe is the largest, and the fifth, though shorter, extends beyond the line of the two syndactyle toes.

Before pointing out certain peculiarities of the skeleton of the Tarsipes, we may add, that in the male the scrotum is suspended in advance of the penis, and that in the female the mammæ, four in number, are placed in an abdominal pouch. There is but one opening for excretion and defecation.

In Paris there are several specimens of this singular animal. The skull of a female studied by MM. Gervais and Verreaux had the hinder part, as well as the lower portion in the mesial line, injured; and this circumstance, combined with its small size, observes these authors, renders it difficult of examination; they were able, however, to observe many of its essential characters.

The skull is much elongated, especially its facial portion; and studying it isolately, one would be tempted to refer it to an animal of the Edentate order, and probably to the family of Ant-eaters, *Myrmecophaga*, &c. The sutures of its bones are not obliterated as those of the *Monotremata* of the same age, but their distinction is less marked on the face than in the cranial region properly so called. The nasal bones are elongated, and terminate in an angle projecting at their point of junction with the anterior margin of the frontals; these are contracted at the interorbital portion, but they present no postorbital process to contribute towards the formation of a complete circular orbit: their antero-posterior development exceeds the transverse diameter.

The skull is broader in the parietal region, and the brain appears to have been more voluminous than in most other marsupial animals. In this form of cranium we perceive an analogy in the genus *Macroscelides*. The cranial cavity is proportionally more ample than in the great

Ant-eater (*Myrmecophaga jubata*). The occipital vertebra in the individual described is not perfect, and does not extend beyond the anterior occipital or interparietal, which is large and much broader than in the *Myrmecobius*. The ex-occipital, or, more correctly perhaps, the mastoid, articulates with the lateral margin of that bone. There is neither parietal crest nor occipital. The two temporal fossæ communicate by a nearly circular opening. The palatine portion of the intermaxillaries, and the anterior portion of the maxillary bones, have two small incisive foramina, and these are somewhat elongated; there is moreover in the palate two elongated openings, separated only by a very narrow bony ridge; the posterior boundaries of these openings and the termination of the palate, owing to the fractured condition of the skull, could not be seen. The suture between the nasal and maxillary bones, as well as the lachrymal, which is rather small, are nearly obliterated; the lachrymal canal is visible. The maxillaries, the length of which is proportionate to the nasal bones, give origin to a zygomatic process, and in fact there exists a complete zygomatic arch. The malar bone is of moderate thickness and depth; its posterior portion gives off a small process which projects above the temporal apophysis, and appears to represent, in a rudimentary condition, the little osseous temporal process observed in the *Echidna*, rather than a true orbital process of the zygoma, which in fact is wanting, as well as the orbital process of the frontal; and in this respect the *Tarsipes* differs from the *Myrmecobius*, with which there exists an analogy as regards some other characters. The alveolar portion of the maxillaries is very hard and presents a cutting edge, which is elevated in such a manner as to give to the palate a slightly concave surface.

The infra-orbital opening is small, and placed in a longitudinal groove of the maxillary bone situated a little in advance of the bone of the zygomatic process through which it is perforated. The auditory bullæ are convex, and nearly continuous with the squamous portion of the temporal. The tympanic circle is complete, and communicates in a direct manner with the bullæ by a large canal, which permits of the interior of the chamber being seen. The articulation of the squamous portion with the great ala of the sphenoid, is oblique from the inferior margin of the zygomatic process in the anterior central portion of the bone of the auditory chamber. The lower part of the squamous element and this outer portion of the pterygoid are on the same plane, and though bulbous, they do not form a second auditory chamber, as in some marsupials, but merely an inflated portion of the cranial cavity. The glenoid cavity for the articulation of the lower jaw is indistinct. This jaw resembles in general form that of *Myrmecophaga jubata*, and it moreover bears a considerable analogy to that of the *Monotremata*. It is sublinear, slender, almost without a trace of coronoid process, and there being no angular process, it does not present the peculiar conformation of this part of the lower jaw which characterizes all the known marsupials; and the condyle, instead of being transverse as in these animals, is situated at the apex of a little curvature formed by the entire masseteric portion

of the maxillary, approaches to a circular form, and is somewhat oblique in its direction, as in the *Myrmecophaga jubata* and in the *Monotremata*. In the *Myrmecobius* an approach to this disposition of the condyle is observable. The masseteric depression is in the form of a longitudinal cleft, which is much longer than the cleft found in certain species of *Macropodidæ*, and very much resembles that which we observe in the lower jaw of some birds. The two inferior maxillary are joined at the *symphysis* by a ligament only, but their junction appears to be more perfect than in the *Edentata* in general: these bones are as remarkable for their compact structure as for their transparency.

Of the remaining portion but few parts are known, viz. the radius and the inferior portion of the cubitus; these are separated in their whole length; the tibia and the fibula, which are also separated as far as their articulation with the tarsus; the fibula is much compressed at its upper extremity.

The dental system of the *Tarsipes* is most anomalous: the lower jaw presents in front a pair of cultriform teeth which have the same horizontal direction as the jaw; the basal portion of these teeth is narrower than the other portion, and the root is very deeply inserted into the jaw; the apical portion is unfortunately broken. These teeth are applied one against the other by their internal surface. Near the posterior third of the dental portion of the same jaw is a small transparent gemmiform tooth, which has the appearance of a little process recurved angularly outwards.

On the anterior third of the left side of the upper jaw are three small teeth; the first, which appears to be in the incisive bones, and which is in a line with the incisive openings, is in the form of a minute simple tubercle; the third, which is situated at the hinder extremity of the anterior third of the dental portion of the jaw, is also gemmiform, rather slender, longer than the first, and somewhat inclined forwards. Between this and the foremost tooth is another tooth, which is smaller than either, and situated nearer to the third than the second tooth. All these teeth are transparent and have but one root; they are all which could be found in the specimen examined; and it is only by inspecting several individuals that the dental formula of this little animal could be correctly ascertained. It is supposed by the authors, that in front of the foremost pair of teeth of the upper jaw here described, another tooth exists, the root of which only is visible; if such should be the case, there would then be three pairs of incisors of unequal size in the upper jaw, and behind these a canine, which is the largest of those teeth.

The *Tarsipes*, as has been shown, presents characters which could scarcely be supposed to exist in a single species, and affords an additional proof that the inspection of a single portion of any animal is not sufficient for the determination of the peculiarities of other parts. Its feet are those of an animal elevated in the scale of organization, and nearly resemble those of the *Tarsius*, differing only in the union of the second and third toes of the hind-feet. The *Tarsipes* also having these two toes shorter than the others and

provided with subulated nails; the singular form of its teeth, and, above all, the analogy which its skull bears with that of the *Monodelph Edentata* and *Monotremata*, render it difficult to determine the rank which the *Tarsipes* ought to occupy among the *Syndactylous Marsupialia*. It may be observed that it makes a considerable approach to *Myrmecobius*, an animal which, in some respects, has likewise affinities with the *Edentata*; but here the feet nearly resemble those of the *Dasyuri*. The *Tarsipes* in all probability had a long tongue, as in the *Echidna* and the *Myrmecophaga*; and it appears, according to the observations made by Lieutenant Dale and Mr. Gilbert, and communicated to M. Gervais by Mr. Waterhouse, that the tongue of the *Myrmecobius* is also very long.

Mr. Gould exhibited a new species of *Petrogale*, which he characterized as follows:—

PETROGALE INORNATA. *Petr. facie et dorso arenaceo-cinereis; humeris canescente irroratis, lateribus pallidioribus absque notis conspicuis; antibrachiis tarsisque arenaceo-cinereis digitis ad apicem saturatè fuscis; caudâ dimidiâ basali arenaceo-fuscâ.*

*Hab.* North coast of Australia.

General colour of the upper parts sandy grey, grizzled over the shoulders, and becoming much lighter on the flanks; an indistinct line, of a lighter hue, along the face under the eye; a dusky red patch behind the elbow; under surface sandy white, inclining to rufous on the lower part of the abdomen; arms and tarsi sandy grey, passing into dark brown at the extreme tips of the toes; basal half of the tail sandy brown, the remainder black, the former colour extending along the sides of the tail for some distance towards the tip; ears sandy grey, bordered by a very narrow line of dark brown on their inner edge; a dark patch at the occiput, passing into a dark line down the forehead.

	Female.	
	Feet.	Inches.
Length from the tip of the nose to the extremity of the tail . . . . .	3	2
Length of tail . . . . .	1	3¼
Length of tarsus and toes, including the nails . . . . .	0	5¼
Length of arm and hand, including the nails . . . . .	0	5
Length of face, from the tip of the nose to the base of the ear . . . . .	0	4½
Length of ears . . . . .	0	1⅞

This new species, for which I am indebted to the kindness of B. Bynoe, Esq., of H.M.S. Beagle, differs from all the other members of the genus in the unusual uniformity of its colouring. Mr. Bynoe collected it on the north coast of Australia, and this is all that is at present known respecting it. In size it is about equal to the *P. lateralis* of the western coast, to which, as also to *P. penicillata*, it is very nearly allied, but differs from both in being destitute of any markings on the sides, in the absence of any dark colouring behind the ears, and in the light colouring of the arms and tarsi.

The following "Descriptions of some new species of *Helicinæ*, in the collection of H. Cuming, Esq.," by Mr. G. B. Sowerby, jun., was read:—

*HELICINA STRIATULA*, Thesaurus Conchyliorum, by G. B. Sowerby, jun., fig. 43. *Hel. testâ subdepressâ, concentricè substriatâ, fulvo-rufescente; aperturâ subquadratâ, margine albo, crasso, reflexo, integro, subsinuato, posticè subdepresso.*

Alt. .23; lat. .30 poll.

*Hab.* — ? Mus. Cuming.

The margin of the aperture in this species is slightly lobed, and sinuous above and below.

*HELICINA MAXIMA*, Sow. jun., Thes. Conch. fig. 11. *Hel. testâ globosâ, subdepressâ, lævi, albâ; aperturâ magnâ, semilunari, margine reflexo, acuto; labio interno crassiusculo; columellâ obtusè angulatâ.*

Alt. .50; lat. 1 poll.

*Hab.* — ? Mus. H. Cuming.

Rather more depressed and larger than *H. Major*, with the base of the columella angulated instead of being notched.

*HELICINA ACUTISSIMA*, Sow. jun., Thes. Conch. fig. 92 to 95.

*Hel. testâ plus minusve depressâ, concentricè leviter striatâ, angulari, acutissimè carinatâ, infra angulos paululùm complanatâ; aperturâ triangulari; labio interno tenuissimo; columellâ subcomplanatâ, ad basim subundatâ; labio externo acuto, validè reflexo, expanso, super angulum subdepresso.*

*Hab.* apud ins. Philippinas. H. Cuming legit.

Var. *a.* *T. luteâ, rufescente, fasciâ rubrâ infra angulo positâ.* Alt. .35; lat. .70. *Hab.* Jacna, ins. Bohol.

Var. *b.* *T. luteâ, rufescente, fasciis rubris tribus ornatâ.* *Hab.* Jacna, ins. Bohol.

Var. *c.* *T. pallidè luteâ, fasciâ rubrâ infra angulum, et alterâ propè suturam positâ.* Alt. .25; lat. .40 poll. *Hab.* Siquijor.

Var. *d.* *T. pallidè luteâ.* *Hab.* Argao, ins. Zebu.

Var. *e.* *T. luteâ, subtùs rubrâ; carinâ albâ.* *Hab.* Argao, ins. Zebu.

Var. *f.* *T. fuscâ, nigricante.* *Hab.* Loboc, ins. Bohol.

Var. *g.* *T. rubrâ, absque fasciis.* *Hab.* Loboc, ins. Bohol.

The above are found on leaves of small shrubs.

*HELICINA TROCHIFORMIS*, Sow. jun., Thes. Conch. f. 90. *Hel. testâ luteâ, Helicinæ acutissimæ simillimâ, sed spirâ altiori; labio externo posticè subdepresso.*

Alt. .20; lat. .30.

*Hab.* Ins. Negros, Philippinarum. H. Cuming legit.

Found on leaves of palms on mountains. It differs from *H. acutissima* principally in being much more conical, and in having the upper part of the outer lip more depressed.

*HELICINA MINUTA*, Sow. jun., Thes. Conch. f. 40, 41. *Hel. testâ parvâ, depressâ, subangulatâ, rubrâ vel stramineâ; margine*

*crasso, effuso; labio interno calloso; columellâ ad basim subemarginatâ.*

Alt. .10; lat. .15 poll.

*Hab.* — ? Mus. H. Cuming.

*HELICINA AGGLUTINANS*, Sow. jun., Thes. Conch. f. 83 to 85. *Hel. testâ depressâ, angulatâ, obtusè carinatâ, supra infraque æqualiter convexâ, minutè concentricè striatâ; aperturâ quadrilaterali; labio interno tenuissimo; columellâ triangulari, complanatâ, subumbilicatâ, ad basin obtusè angulatâ; labio externo effuso, reflexo, posticè leviter depresso; operculo crassiusculo, irregulariter quadrilaterali; epidermide aliquando per adhæsiorem rupium fragmentorum in carinam latam præruptam productâ.*

Alt. .45; long. .75 poll.

*Hab.* apud ins. Philippinas. H. Cuming legit.

Var. *a.* *T. luted.* Ins. Guimaras.

Var. *b.* *T. aurantiâ;* *subtùs fasciâ rubescente.* *Hab.* Loboc, ins. Bohol.

Var. *c.* *T. aurantiâ-rubescente.* *Hab.* Dingley, Panay.

The shells of this species are found on rocks, the decomposed particles of which are agglutinated to the epidermis in some specimens, so as to form a broad broken keel on the angle of the whorls.

*HELICINA LAZARUS*, Sow. jun., Thes. Conch. f. 91. *Hel. testâ pallidè fulvâ, H. agglutinanti simillimâ, sed magis elevatâ; columellâ angustiori.*

Alt. .28; lat. .40 poll.

*Hab.* Bongabong, N. Ecija, ins. Luzon, Philippinarum.

Found on leaves of palms.

*HELICINA POLITA*, Sow. jun., Thes. Conch. f. 76 to 81. *Hel. testâ politâ, tenui, pellucidâ, plus minusve depressâ et angulatâ; anfractibus supernè subcomplanatis, infra ventricosis; labio interno tenui, anticè paululùm inflato; columellâ angustatâ, ad basim leviter angulatâ; labio externo tenui, expanso, reflexo, super angulum plus minusve depresso; operculo internè rubro, externè submargaritaceo.*

*Hab.* apud ins. Philippinas. H. Cuming legit.

Var. *a.* *T. aurantiâ, magnâ, angulatâ.* Alt. .40; lat. .60. Sorso-gon, pr. Albay, ins. Luzon.

Var. *b.* *T. aurantiâ, minori.* Alt. .20; lat. .25. Sinait, Ilocos, ins. Luzon.

Var. *c.* *T. aurantiacâ, supernè rubrâ.* Misamis, ins. Mindanao.

Var. *d.* *T. aurantiâ; fasciâ rubrâ in medio super angulum anfractuum.* Abulug, pr. Cagayan, ins. Luzon.

Var. *e.* *T. aurantiâ, fasciis albis binis ornatâ.* St. Nicholas, ins. Zebu.

Var. *f.* *T. aurantiâ, supernè pallidè rosâ.* Abulug, pr. Cagayan, ins. Luzon.

From the large, somewhat angulated, orange variety, down to the more globose and small varieties, the gradation is so slow that it is impossible to find a line of demarcation sufficiently distinct to admit

of specific separation, although the two extremes differ considerably in general appearance.

HELICINA SIMILIS, Sow. jun., Thes. Conch. *Hel. testá* H. politæ *simillimá, sed impolitá, concentricè leviter striatá, fuscá.*

*Hab.* apud insulam Guadaloup. Mus. Cuming.

HELICINA PARVA, Sow. jun., Thes. Conch. f. 82. *Hel. testá* H. politæ *simillimá, sed magis rotundatá, labio externo minimè depresso.*

*Hab.* Argao, ins. Zebu. H. Cuming legit.

Found on leaves of bushes, and differs only from the smaller varieties of *H. polita* in being globular, and having the outer lip not at all depressed above.

HELICINA GUADALOUPENSIS, Sow. jun., Thes. Conch. f. 65, 66. *Hel. testá* *levi, depressá, subangulatá, concentricè leviter striatá; columellá ad basin subnodosá; labio externo crasso, reflexo; anfractibus gradatim crescentibus, supra infraque subventricosis; operculo fusco.*

*Hab.* apud insulam Guadaloup. Mus. H. Cuming.

Var. a. *T. rubrá, lutescente, majori.* Alt. .35; lat. .60.

Var. b. *T. pallidè brunnea, minori.* Alt. .20; lat. .35.

A memoir on the family of *Touracoos*, by Dr. E. Rüppell, was next read. In this memoir the author characterizes the following two new species of the genus *Chizærhis* from Abyssinia:—

CHIZÆRHIS PERSONATA. *Chi. regione ophthalmicá, genis, mento et gulá, pennis denudatis, cute nigricante, vibrissis brevissimis vestita; pileo crista plicatilis, plumis laxis, elongatis, colore murino; nuchá, regione paroticá, juguloque albidis, jugulo et pectore viridi-glaucis; abdomine et tibiis rufo-cervinis; auchenio, dorso et alis cæσιο-umbrinis, reetricibus olivaceis; caudá elongatá, subrotundatá, suprâ cinereá, infrâ luteo-virenti, rostro et pedibus nigris; iride albo-cinerascente.*

The most characteristic peculiarity in the present species, observes Dr. Rüppell, consists in the absence of feathers on the face and throat, the skin of these parts presenting only small scattered hairs, and apparently being of a blackish purple colour. The feathers of the upper surface of the head are elongated, and have the plumelets soft and flowing; they no doubt are erectile, and form a crest at the will of the bird. The two sexes agree perfectly, both in size and colouring. The dimensions in French measure are as follow:—

	in.	lin.
Total length from the tip of the beak to the tip of tail .	19	0
Tail . . . . .	10	0
Length of the beak, measuring along the upper curvature	1	1
Greatest height of the two mandibles . . . . .	0	7½
Length of the wing from the bend to the extremity of } the fourth wing-feather, which is the longest . . . }	8	0
Length of the tarsus . . . . .	1	6
Length of the middle toe, including the nail . . . . .	1	10



CHIZÆRHIS LEUCOGASTER. *Chi. pileo crista plicatilis, plumis apice truncatis, capite, gutture, collo, cervice, dorso et alis cæsio-umbrinis; reatricibus medianis nigro-marginatis, remigibus dimidio basali albis, dimidio apicali umbrino-nigris; caudâ subrotundatâ, suprâ et subtùs nigrâ, fasciâ albâ latâ transversâ; reatricibus duabus intermediis cæsio-umbrinis; abdomine et tibiis albis; rostro et pedibus nigricantibus, iride umbrinâ.*

A peculiarity in this species consists in the truncated form of the feathers which constitute the crest. Both sexes agree in size and colouring. The dimensions are as follow:—

	in.	lin.
Total length .....	18	9
Tail .....	9	9
Beak .....	0	11½
Height of beak .....	0	6½
Length of the wing to the end of the fifth wing-feather	7	9
Tarsus .....	1	8
Middle toe, including the nail .....	1	10

January 25.—William Horton Lloyd, Esq., in the Chair.

Mr. W. D. Cooper communicated to the Meeting some notes, by T. S. Thomson, Esq., relating to the habits of the *Bassaris astuta* of Lichtenstein. These notes are confirmatory of the observations of Mr. Charlesworth, made at a former meeting of the Society\*. The animal, Mr. Thomson has been informed, is found in most parts of the republic of Mexico, but is not known beyond the habitations of man. Besides fowls, butchers' meat, &c., it will eat bread, fruit, and sugar; it breeds principally in outhouses, and particularly in neglected spots, producing three or four at a birth. Sometimes it is tamed, and used like the domestic cat to destroy rats, mice, &c.

Mr. Gould exhibited several Australian Mammals, from his own collection, which he considered to be new to science. The first to which he drew attention was a species of the genus *Macropus*, as now restricted, which, from the sooty black colouring of the face, he proposed to describe under the name

MACROPUS MELANOPS. *Macr. vellere molli obscurè griseo; dorso, collo, plagâque magnâ ad basin femoris, fuliginoso-lavatis; lateribus corporis indistinctè fulvo tinctis; capite fuliginoso; rhinario nigro; auribus intus pilis albis vestitis, extus pilis albis, nigro irroratis, ad basin nigris; gulâ pectoreque albescentibus; tibiis tarsisque fusco-albis, digitis nigris; caudâ robustâ, suprâ fuliginosofuscâ, subtùs pallidiore, dimidiâ apicali nigrâ.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin. . . . .	33	0
————— caudæ .....	20	6
————— tarsi digitorumque .....	11	9
————— ab apice rostri ad basin auris . . . . .	5	9
————— auris .....	3	9

\* Proceedings for July 13, 1841, p. 60.

The most striking character in this species is the general deep hue of the fur of the upper parts of the body and neck; the colour may be described as sooty grey, but having moreover a brownish tint; the whole upper surface and sides of the head are nearly black; on the sides of the body and outer side of the hind legs, at the base, a very faint fulvous tint is observable; a large space on the haunch is of the same deep hue as the back; the throat and chest are whitish, the visible portion of the hairs on these parts being white; at the base, or next the skin, they are of a deep grey colour, and so are those on the abdomen; but here, though the hairs are tipped with white, the grey tint shows itself to a greater degree. The ears are thickly clothed with long white hairs on the inner side; externally they are pencilled with black and white, in about equal proportions, but at the base they are clothed with the same dense fur as that of the head, and this is black. The fore-legs, like the outer surface of the ears, are pencilled with black and white, the black becoming more conspicuous towards the toes, which are covered with black hairs. The hind-legs and tarsi are chiefly of a brown-white hue, but on the toes there is a considerable admixture of black; the hairs which cover the nails and the sides of the toes are almost entirely black. The tail is of the same colour as the body at the base, and has the apex black; the portion covered with black hairs is rather less than that clothed with the paler fur.

The following new Australian Mammals were also characterized by Mr. Gould:—

**BELIDEA ARIEL.** *Bel. pallidè cinerea, lined dorsali, a basi rostri ferè usque ad basin caudæ extensâ, circulo interrupto ad basin auris, membrandque laterali suprâ nigrescentibus, hac ad latera flavescenti-albâ; corpore subtùs pallidè flavo; caudâ gracili ad apicem nigrâ; auribus mediocribus; pedibus pallidis.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin. . . .	6	0
———— caudæ . . . . .	7	0
———— auris . . . . .	0	8
———— ab apice rostri ad basin auris . . . .	1	3½

Two specimens of this species of Flying Phalanger were received by Mr. Gould from Port Essington. In size and proportions it approaches most nearly to the *Belidea breviceps*, being considerably less than the *Petaurus sciureus* of authors; but it is readily distinguished by its general pale colouring, and more especially by the pale yellow tint of the under parts of the body. The tail is slender as in *B. breviceps*, Waterh.; the fore and hind-feet are of a pale yellowish hue in one specimen; in the other the fore-feet have a pale brownish tint: a narrow black mark, commencing between the eyes, runs along the back, and extends nearly to the root of the tail; a narrow blackish line surrounds the eyes, and a black ring encircles the base of the ears, but is interrupted under the ear, which is sparingly clothed with minute hairs, excepting at the base externally, where they are covered with fur like that on the head, and which is of a black colour, forming a

portion of the dark ring before mentioned; and on the hinder margin of the ear, at the base, is a fringe of pale yellowish hairs. The upper surface of the head is of a paler hue than the upper parts of the body, which are of a pale ash-colour, slightly tinted with yellowish; the upper surface of the lateral membrane is blackish, and so is the anterior portion of the fore-arm and region of the wrist; a dusky tint is also observable on the posterior part of the hind-leg.

MUS PENICILLATUS. *Mus griseo-fuscus, vellere ferè ut in M. decumano; corpore subtùs pedibusque albis flavo lavatis; auribus mediocribus, posticè subemarginatis; caudà corpore capiteque paulo longiore, gracili, dimidià apicali pilis longis nigris vestitá.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin . . .	7	3
———— caudæ . . . . .	7	9
———— ab apice rostri ad basin auris . . . .	1	5½
———— tarsi digitorumque . . . . .	1	8
———— auris . . . . .	0	7¾

*Hab.* Port Essington.

This species of Rat is rather less than the *Mus decumanus*; in the character of its fur it nearly resembles that animal, but the hairs are rather more adpressed; the colouring of the upper parts of the body also nearly resembles that of *M. decumanus*; there is, however, a rusty tint in the region of the occiput and on the back of the neck. Around the angle of the mouth, the chin, throat, and all the under parts of the body, as well as the feet and inner side of the legs, are white, with a faint yellow tint, which might be described as cream-colour; and the hairs on these parts are of an uniform colour to the roots, excepting on the chest, where they are grey next the skin. The tail is long and slender, sparingly clothed at the base with minute bristly hairs, as in most species of the genus; but about the middle of the tail the hairs assume a black colour, and are longer, and towards the apex they soon attain a considerable length, measuring at and near the tip half an inch or more. The ears are narrower than usual, somewhat pointed, and slightly emarginated behind; they are sparingly clothed with minute hairs.

MUS HIRSUTUS. *Mus vellere hirsuto, corpore suprà fuscescente pilis nigris crebrè commixtis, subtùs fulvescens, fusco rufoque tincto; auribus mediocribus; caudà longá pilis nigris, aliquanto longis, vestitá; dimidià apicali pilis longioribus, his ad apicem caudæ rufescentibus.*

Of this large and curious Rat, Mr. Gould regretted that he did not possess a perfect skin; the somewhat mutilated skin which he exhibited, together with a perfect skeleton, however, displayed characters very distinct from other species of *Mus*. Compared with the known species of that genus, he observed it approached most nearly to the *Mus giganteus* of Hardwicke; it is equal in size to that animal, and has the same coarse shaggy fur, but is readily distinguished by its well-clothed tail, the hairs on this part being much longer than usual in the genus, especially on the apical half, where the scales are hidden by them; those at the point of the tail measure upwards of an inch in length, and at the distance of two inches from the point

they average about an inch in length; on this part they have a rusty hue, but on the remaining portions they are black. On the upper parts of the body the shorter hairs are of a yellowish brown colour, but the longer interspersed hairs being numerous, and of a black colour, give a deep general tint to these parts. The under parts of the body are of a rusty yellow colour, tinted with brownish on the neck and chest, and having a more decided rust-colour on the abdomen.

The skull approaches that of *Mus giganteus* in general form, but is rather narrower and longer; the palatal portion is broader, and the incisive foramina are shorter, terminating posteriorly, about one-eighth of an inch anterior to the foremost molars; whilst in *M. giganteus* these foramina terminate in a line with the front molars, or rather behind that line; the nasal bones are longer and rather narrower, and the occipital portion of the cranium is decidedly smaller. The principal dimensions, taken from the skeleton, are as follow:—

	in.	lin.
Length from tip of nasal bones to end of sacral vertebræ	10	4
Length of tail	13	0
Length of tarsus and claws	2	8½
Length of skull	2	6½
Width of ditto	1	3¾
Length of nasal bones	1	0½
Distance between incisors and molars of the upper jaw	0	9½
Width between molars	0	3½
Length of incisive foramina	0	5
Width of occiput	0	8

*MUS DELICATULUS.* *Mus suprà pallidè fusco-flavus; corpore ad latera flavescente, subtùs albo; caudâ mediocri suprà fuscâ, subtùs ad basin albescenti; auribus parvulis; pedibus gracilibus, albis.*

	unc.	lin.
Longitudo ab apice rostri ad caudæ basin	2	5
———— caudæ	2	2
———— tarsi digitorumque	0	8
———— ab apice rostri ad basin auris	0	8
———— auris	0	3¾

In colouring the present species greatly resembles the *Mus sylvaticus* of Europe, but it is a trifle paler; its size is less than that of the common mouse (*Mus musculus*, Auct.). The fur is soft and short; that on the upper parts of the body is of a pale yellow-brown colour. The sides of the body are of a delicate yellow tint, and the lower parts of the sides of the muzzle, the chin, throat, and whole under parts, as well as the feet, are pure white; along the mesial line of the abdomen and on the throat the hairs are of an uniform colour to the base. The feet are slender, and the ears are rather small. The tail is slender, and nearly equal in length to the head and body.

Two specimens exhibiting the above characters were exhibited by Mr. Gould.

## LINNÆAN SOCIETY.

April 19, 1842.—E. Forster, Esq., V.P., in the Chair.

J. O. Westwood, Esq., F.L.S., exhibited numerous species of *Sphingidæ*, *Nocturnal Lepidoptera*, and other insects, from the collection of Lieut.-Col. Hearsey, formed during a residence of thirty years in Central India. He stated this collection to be very interesting on account of its local character, and as compared with the splendid collections recently received from Sylhet and the Himalayas, exhibited at late meetings of this Society. In Colonel Hearsey's collection the species of the modern genus *Papilio* are very few in number, and well known. Of *P. Hector* there is but a single specimen. There is not a single species of *Lucanus*, nor true *Fulgora*, in the collection; a striking peculiarity as compared with the Sylhet and Himalayan collections. The collection, however, contains a species of *Paussus* and one of *Diopsis*, both new; a very minute *Apotomus*, specimens of both sexes of the interesting Hymenopterous genus *Trirogma*, a number of very English-looking *Harpalidæ*, various *Alhyrei* and *Bolboceri*, as well as most of the new species described by Mr. Saunders in the last Part of the Transactions of the Entomological Society.

Read the concluding portion of "A Catalogue of Spiders, either not previously recorded or little known as indigenous to Great Britain, with remarks on their Habits and Economy." By John Blackwall, Esq., F.L.S., &c.

The following is a list of the species enumerated by Mr. Blackwall:—

1. *Drassus sericeus*, Walck. In several of the northern counties of England and Wales.
2. *Drassus ater*, Walck. Common in Denbighshire and Caernarvonshire.
3. *Clubiona epimelas*, Walck. Found rarely in the wooded districts of Denbighshire.
4. *Clubiona accentuata*, Walck. In the woods of Denbighshire and Caernarvonshire.
5. *Clubiona erratica*, Walck. Frequent in the woods and commons of Denbighshire.
6. *Argyroneta aquatica*, Walck. In the fens of Cambridgeshire, *Mr. Babbington*; and in small pools in Cheshire, *Mr. Glover*.
7. *Ciniflo ferox*, Blackw. Abundant in England and Wales.
8. *Ergatis latens*, Blackw. On commons in Denbighshire.
9. *Tegenaria domestica*, Walck. Oxford and Cambridge.
10. *Lycosa andrenivora*, Walck. Commons and old pastures in various parts of England and Wales.
11. *Lycosa agrestica*, Walck. Old pastures in England and Wales.
12. *Lycosa aliodroma*, Walck., var. *leucophæa*. *Lycosa leucophæa*, Blackw., in Lond. and Edinb. Phil. Mag. x. p. 104.
13. *Lycosa picta*, Hahn. In Cheshire and Denbighshire, frequenting sandy districts on the coast.
14. *Lycosa lugubris*, Walck. Abundant in woods in Denbighshire and Caernarvonshire.
15. *Lycosa pallida*, Walck. Frequent on banks of rivers in Denbighshire and Caernarvonshire.

16. *Lycosa piratica*, Walck. Marshes and margins of pools in England and Wales.

17. *Dolomedes fimbriatus*, Walck. In the fens of Cambridgeshire, *Mr. Babington*.

18. *Salticus cupreus*, Hahn. Mountain-woods of Denbighshire and Caernarvonshire.

19. *Salticus coronatus*, Blackw. *Attus coronatus*, *Walck.* Common in the woods of Denbighshire and Caernarvonshire.

20. *Salticus gracilis*, Hahn. Gwydir woods in Caernarvonshire.

21. *Thomisus brevipes*, Hahn. In fields adjacent to woods, at Oakland, near Llanrwst, Denbighshire.

22. *Thomisus bifasciatus*, Blackw. *Xysticus bifasciatus*, *Koch.* In pastures near Llanrwst.

23. *Thomisus citreus*, Walck. In the western parts of Denbighshire.

24. *Philodromus dispar*, Walck. In the wooded parts of Denbighshire and Caernarvonshire.

25. *Philodromus cespicolens*, Walck. In woods in Denbighshire.

26. *Philodromus oblongus*, Walck. In the north of Cheshire.

27. *Sparassus smaragdulus*, Walck. England, *Mr. Babington*; in the woods at Tan-y-Bwlch in Merionethshire, *Mr. Glover*.

28. *Theridion denticulatum*, Walck. Common in England and Wales.

29. *Theridion signatum*, Walck. Among heath in Denbighshire: rare.

30. *Neriëne trilineata*, Blackw. *Theridion reticulatum*, *Hahn.* Under stones in the neighbourhood of Manchester.

31. *Neriëne graminicolens*, Blackw. Sp. nov. a *Neriëne trilineata* diversa pedibus palisque unicoloribus nec annulatis. Old pastures at Oakland, near Llanrwst, Denbighshire.

32. *Manduculus vernalis*, Blackw. *Theridion vernale*, *Hahn.* In pastures in various parts of Lancashire and Denbighshire.

33. *Pholcus phalangioides*, Walck. Barmouth, Merionethshire, *Mr. Potter*; Liverpool, *Mr. Glover*; Isle of Wight.

34. *Linyphia pallida*, Blackw. *Theridium pallidum*, *Koch.* Among grass in the grounds about Oakland.

35. *Epeïra bicornis*, Walck. In the wooded parts of Denbighshire.

36. *Epeïra agelena*, Walck. In pastures near Llanrwst.

37. *Epeïra scalaris*, Walck. In the neighbourhood of London.

38. *Epeïra umbratica*, Walck. Abundant in various parts of England and Wales.

39. *Epeïra fusca*, Walck. In Denbighshire and Caernarvonshire.

40. *Epeïra antriada*, Walck. Common in the north of England and Wales.

41. *Dysdera erythrina*, Walck. In the town of Manchester; also in Cambridge, *Mr. Potter*.

42. *Dysdera rubicunda*, Koch. Cambridge, *Mr. Babington*.

43. *Dysdera Hombergii*, Walck. Plentiful in the wooded districts of Denbighshire and Caernarvonshire.

44. *Oönops pulcher*, Templ. *Deletrix exilis*, *Blackw.*, in Lond. and Edinb. Phil. Mag. x. p. 100. In Lancashire, Denbighshire and Caernarvonshire: abundant in the two last.

Mr. Blackwall states, that with a few exceptions, the spiders comprised in the foregoing catalogue have never before been recognized as British species. With respect to nearly the whole of them, numerous facts are detailed relative to their structure, instincts, economy and haunts, with occasional remarks on their nomenclature and systematic arrangement.

Read also "a Description of a new Indian species of *Paussus*." By J. O. Westwood, Esq., F.L.S., &c.

This species, which is in the collection made by Lieut.-Colonel Hearsey mentioned above, approaches *Platyrrhopalus* in having the penultimate joint of its labial palpi about two-thirds the length of the terminal joint. In all its other characters, however, it accords so exactly with the Indian species of Mr. Westwood's second division of the genus *Paussus*, that were the antennæ broken off, it would be almost impossible to distinguish it from *Paussus cognatus*.

*Paussus Hearseyanus*, rufo-castaneus nitidus punctatus, elytris singulis plagâ latâ longitudinali nigrâ, capite pone oculos carinâ elevatâ transversâ alterâque longitudinali medianâ ad nasum ferè ductâ, antennarum clavâ subovatâ basi extûs in hamum productâ; margine posticè supernèque obliquè 3-impresso.

The only specimen known was captured by Col. Hearsey at Benares by night, having flown against the lamp and fallen upon the table, a habit observed in other species of the genus by several Indian entomologists.

May 5.—The Lord Bishop of Norwich, President, in the Chair.

Read a portion of Dr. Hamilton Buchanan's Commentary on the 8th Part of Rheede's 'Hortus Malabaricus.'

May 24.—The Lord Bishop of Norwich, President, in the Chair.

This day, the Anniversary of the birth of Linnæus, and that appointed by the Charter for the Election of Council and Officers, the President opened the business of the Meeting, and stated the number of Members whom the Society had lost during the past year, of some of whom the Secretary read the following notices:—

*Sir Charles Bell, K.H., F.R.S. Lond. & Ed.*, Professor of Surgery in the University of Edinburgh.

The very recent death of this eminent surgeon and distinguished physiologist precludes on the present occasion any detailed account of his life and works. He was born in Edinburgh in 1778, and the early part of his life was spent in his native city as the assistant of his brother John in his surgical lectures. He came to London in 1806, and became lecturer on surgery at the Hunterian School in Windmill Street, and afterwards one of the surgeons of the Middlesex Hospital. His important discoveries in the functions of the Nervous System, by which his fame has been most widely spread, were communicated in a series of papers read before the Royal Society, commencing in 1821. On the accession of King William the Fourth he received the honour of knighthood; and in 1836 he returned to Edinburgh, having been appointed to the Professorship of Surgery in that University. He died almost suddenly at the beginning of the present month.

*John Eddowes Bowman, Esq.*, was born at Nantwich in Cheshire, on the 30th October, 1785. He was in early life confined to business during more than twelve hours of the day, and yet contrived, by early rising, to cultivate a taste for botany, which he had

imbibed from his father. The small town in which he lived furnished no persons of congenial pursuits with whom he could associate, but this circumstance, though it limited his progress, did not damp his ardour. He became the manager of a bank at Welch Pool, and with an income extremely limited, was not only enabled to give a liberal education to his rising family, but, by the help of such books and instruments as he could purchase, to extend his studies to many branches of natural science with great zeal and success. In 1824 he became a partner in a banking establishment in Wrexham, from which he retired in 1830, and never entered into business again; for being in possession of a moderate competence, he willingly relinquished together the profits and the cares of active life, in exchange for the tranquil happiness he hoped to enjoy from the undivided pursuit of those sciences of which he had ever been passionately fond. Hitherto he had been able to follow them only as a recreation, having never allowed their cultivation to encroach on the time set apart for business; yet he had already, from the ample stores around him, acquired extensive collections in the departments of botany and geology, which were his favourite studies.

In 1837 he transferred his residence to Manchester, where he intended to pass the remainder of his life. During his short abode in that great emporium of manufactures and commerce he endeavoured by all the means in his power to advance and diffuse a love for science, and especially for natural history; and by his associates in the different societies of that place his memory will be warmly cherished. He had looked forward with much interest to the approaching meeting of the British Association for the Advancement of Science in that town, but this hope was not realized. He died after a sudden illness on the 4th December last.

Mr. Bowman became a Fellow of this Society in 1828. He has contributed two papers to the sixteenth volume of its 'Transactions': viz. "An Account of a new Plant of the Gastromycous order of *Fungi*," which is well described and figured under the name of *Enerthema elegans*; and a memoir "On the parasitical connexion of *Lathræa Squamaria*, and the peculiar structure of its subterranean leaves." The last-named paper is a valuable contribution to our knowledge of a very obscure branch of vegetable physiology, the connection, namely, of Root-Parasites with the plants on which they grow, and is beautifully illustrated by two plates of details, from Mr. Bowman's own pencil. His other natural-history publications are, with one exception, geological. They consist of, 1. a memoir "On the Longevity of the Yew, as ascertained from actual sections of its trunk, and on the origin of its frequent occurrence in Churchyards," in Loudon's 'Magazine of Natural History for 1836'; 2. "Notes on a small patch of Silurian Rocks to the W. of Abergel, on the northern coast of Denbighshire," communicated by Mr. Murchison to the Geological Society in 1838; 3. "On a white fossil Powder found under Peat-Bog in Lincolnshire, composed of the siliceous fragments of microscopic parasitical *Confervæ*;" 4. "On the origin of Coal, and the geological conditions under which it was produced;" 5. "Ob-



servations on the characters of the Fossil Trees discovered on the line of the Bolton Railway;" 6. "On the Upper Silurian Rocks in the Vale of Llangollen, North Wales;" (the four latter communicated to the Manchester Geological Society, and published in the first volume of their Transactions;) 7. three papers in the 'Philosophical Magazine' for 1840, "On the Natural Terraces on the Eildon Hills;" and 8. a memoir in the same Journal for 1841, "On the question whether there are any evidences of the former existence of Glaciers in North Wales."

*William Harrison, Esq.*, Queen's Counsel, a Bencher of the Inner Temple, Counsel of the Treasury and War Office, and Attorney-General for the Duchy of Cornwall, died at his seat at Cheshunt, Herts, on the 4th of October last. He was eminently distinguished in his profession, in the parliamentary business of which he for many years took the lead. Those among us who have visited his retreat at Cheshunt are not likely soon to forget the beautiful garden, with its noble range of stoves and conservatories, which he had formed there, or the kind hospitality with which they were received. Much of his leisure was devoted to planting, and his garden exhibited, in the great variety of trees and shrubs which it contained and the taste displayed in their arrangement, ample proof of his attachment to that pursuit.

*James Rawlins Johnson, M.D., F.R.S., &c.*, was author of "A Treatise on the Medicinal Leech, including its medical and natural history, with a Description of its Anatomical Structure; also, Remarks upon the Diseases, Preservation and Management of Leeches," 1816, 8vo, London; and of two papers published in the 'Philosophical Transactions' for 1817, entitled "Observations on the mode of Propagation of the *Hirudo vulgaris*, or Rivulet-Leech," and "On the *Hirudo complanata* and *Hirudo stagnalis*, now formed into a distinct genus under the name of *Glossopora*." These two papers were reprinted in 1825, with some additional facts and observations, under the title of "Further Observations on the Medicinal Leech." In these publications Dr. Johnson contributed much to the elucidation of the natural history of the Leech, which has since been so ably completed by Carena and others.

*Aylmer Bourke Lambert, Esq.*, the last survivor of the original members of the Linnean Society, and for nearly fifty years one of its Vice-Presidents, was born at Bath on the 2nd of February, 1761. His father, Edmund Lambert, Esq., of Boyton-House, near Heytesbury, Wilts., married Bridget, daughter of the last Viscount Mayo and his only surviving child, through whom Mr. Lambert inherited the family property and the name of Bourke. He was educated at St. Mary's Hall, in the University of Oxford, and attaching himself early in life to botanical pursuits, joined the Linnean Society at its foundation, and became one of its warmest friends and promoters. In 1791 he also became a Fellow of the Royal Society.

On succeeding to his paternal estate, he was enabled to indulge his taste for botany more freely, and laboured with great ardour and success to increase his herbarium, which at length acquired the charac-

ter of being one of the most valuable and important private collections in existence. Of this herbarium, and of the several collections from which it was chiefly formed, an account has been given by Mr. Don, who for many years acted as its curator, and who had also charge of Mr. Lambert's extensive botanical library. These collections were at all times most liberally opened by their possessor for the use of men of science, and one day in the week (Saturday) was constantly set apart for the reception of scientific visitors, travellers and others, who either brought with them or sought for information on botanical subjects.

Mr. Lambert's separate publications are two in number: "A Description of the Genus *Cinchona*," London, 1797, 4to, and "A Description of the Genus *Pinus*," London, 1803-24, in two vols. folio. Of the latter work, which is one of the most splendid botanical publications that ever issued from the press, a second edition, with additions, was published in 1828, and a third volume was added in 1834. A small edition, in two vols. 8vo, was also published in 1832.

His other works consist entirely of papers in our 'Transactions.' They are as follows:—

"An Account of the *Canis Graius Hibernicus*, or Irish Wolf-Dog," in vol. ii.

"Anecdotes of the late Dr. Patrick Browne, author of the 'Natural History of Jamaica,'" in vol. iv., containing some interesting particulars relative to that intelligent naturalist, from whom Mr. Lambert received and presented to this Society his MS. of a 'Flora Hibernica,' together with a small herbarium, collected in the counties of Mayo and Galway, and a separate collection of Mosses.

"A Description of the Blight of Wheat, *Uredo Frumenti*."

"A Description of *Bos frontalis*, a new species from India," described from a living specimen in the collection of Mr. Brookes of the New Road.

"Observations on the *Zizania aquatica*," accompanied by a figure from the pencil of Ferdinand Bauer, taken from specimens grown by Sir Joseph Banks in a pond at Spring-grove.

"A further Account of *Bos frontalis*," containing numerous particulars of its habits, taken from a Letter written by Mr. Macrae. These four papers are in vol. vii.

"A Description of a new Species of *Macropus* (*M. elegans*), from New Holland," from a living specimen in the collection at Exeter Change, in vol. viii.

"Some Account of the Herbarium of Prof. Pallas," in vol. x., which, besides a general account of the collection, then recently purchased by Mr. Lambert, contains characters of a number of new species of plants, which are figured on six accompanying plates.

"Notes relating to Botany, collected from the MSS. of the late Peter Collinson, Esq.," also in vol. x., and affording many interesting notices relating to botanists, gardeners and gardens in England, in the middle of the last century.

"Description of a new Species of *Psidium*" (*P. polycarpon*), which had ripened its fruit at Boyton, in vol. xi.

“Some Account of the Galls found on a species of Oak from the shores of the Dead Sea,” and a “Note on the Mustard-plant of the Scriptures,” in vol. xvii.

Mr. Lambert's health had for some years been failing, and he had ceased to visit his country-seat at Boyton, but preferred, when out of town, taking up his residence of Kew, where his proximity to the Royal Gardens, and to his friends in town, afforded him more copious sources of enjoyment than he could have found elsewhere. He died at Kew, on the 10th of January in the present year, and his remains were removed to Boyton for interment. He married Catharine, daughter of Richard Bowater, Esq., of Allesley in the county of Warwick, but was left a widower, without any family, some years before his death.

*Archibald Menzies, Esq.*, who, on the death of Mr. Lambert, became father of the Society, was born at Weem, in the county of Perth, on the 15th of March, 1754. He was early attached to the Botanic Garden at Edinburgh, of which his brother William afterwards had charge; and was enabled, through the kind assistance of Dr. John Hope, then Botanical Professor in that University, who was attracted by his love for natural history and especially botany, to pass through the academical studies necessary for his education as a surgeon. In the summer of 1778 he made a tour, under the auspices of Dr. Hope, through the Highlands and Hebrides, with the view of collecting their rarer plants, to which attention was then strongly directed by the recent publication of Lightfoot's 'Flora Scotica.' He afterwards became assistant to a surgeon at Caernarvon; but soon quitting for a time the practice of his profession on shore, he entered the navy, and became assistant-surgeon on board the *Nonsuch*, Captain Truscott, in which vessel he was present at the famous victory obtained by Rodney over the Comte de Grasse on the 12th of April, 1782. After the peace of that year he remained for some time on the Halifax station. In 1786 he embarked as surgeon on board the *Prince of Wales*, a vessel fitted out by the enterprising firm of John and Cadman Etches and Co., and was placed under the command of Lieut. (afterwards Captain) Colnett, of the Royal Navy, for a voyage of commercial discovery to the north-west coast of America. In this voyage he visited Staten Land, where he remained for some time, the Sandwich Islands and China, as well as North-western America, and returned from China by the direct route to England in the beginning of 1789. In the following year he was appointed in the capacity of naturalist, and with the rank of surgeon, to accompany Captain Vancouver, on board the *Discovery*, in his celebrated voyage; from which, after visiting King George's Sound on the south coast of New Holland, a part of New Zealand, Otaheite and the Sandwich Islands, and exploring by far the greater part of the north-west coast of America, he returned to England in the autumn of 1795. During one of the visits made by this expedition to the Sandwich Islands he ascended Wha-ra-rai and Mowna-roa, two of the principal mountains of the island of Owhyhee, and determined their heights (that of the latter exceeding 13,000 feet) by barometrical

observations made simultaneously with others on board the vessel. "Some account" of his ascent of the former was subsequently given by him in the 1st and 2nd volumes of Loudon's 'Magazine of Natural History.' From an early period of the voyage Mr. Menzies added to his duties as naturalist those of surgeon of the Discovery, and it affords a striking proof of his professional skill, that on so arduous a service and in so protracted a voyage, not a single man was lost by disease after quitting the Cape of Good Hope in their passage out.

From these various voyages Mr. Menzies brought back with him to England large collections of natural history, chiefly botanical. A very considerable number of the plants which he had collected, and especially of the Cryptogamous, to the study of which he was always devotedly attached, were new to science, and have been described from his specimens by Sir James Edward Smith, Mr. Brown, Sir W. J. Hooker and other botanical friends, among whom they were most liberally distributed. His own publications were few in number. In the 1st volume of our 'Transactions' are contained "Descriptions of three new Animals [*Echeneis lineata*, *Fasciola clavata*, and *Hirudo branchiata*] found in the Pacific Ocean" during his first voyage round the world; and in the 4th, "A new Arrangement of the Species of *Polytrichum*, with some Emendations," which, together with an Appendix, afterwards added, forms a valuable monograph of that extensive genus. In the 'Philosophical Transactions' for 1796, he gave, in conjunction with Mr. (afterwards Sir Everard) Home, "A Description of the Anatomy of the Sea-Otter," of which he had brought home a fine specimen, afterwards presented, with many other zoological specimens and a set of his plants, to the British Museum.

He subsequently served in the West Indies as surgeon of the *Sanspareil*, commanded by Lord Hugh Seymour; but early in the present century he quitted the sea, and continued to practise his profession in London. For some years previous to his death he had retired to Notting Hill, where he passed the tranquil remainder of his lengthened existence, eager to the last to obtain additions to his botanical collection, and enjoying the society of his numerous friends with a kindness of heart that never failed.

He died on the 15th of February in the present year, having nearly reached the age of 88, and was buried beside his wife (who died five years earlier, and by whom he had no children), in the Cemetery at Kensal Green. He left his herbarium, consisting chiefly of Cryptogamous plants, *Gramineæ* and *Cyperaceæ*, arranged with characteristic neatness on paper of an 8vo size, to the Botanic Garden at Edinburgh, where he had studied; and also gave by his will a bequest of £100 to this Society, of which he became a Fellow on the 19th of January, 1790, and to which he was always most warmly attached.

*David Pennant, Esq.*, son of the distinguished naturalist and elegant writer to whom we owe so many agreeable and instructive publications, and who, on the foundation of this Society, was elected

one of its Honorary Members, died on the 24th of June, in the 78th year of his age. He edited some of his father's posthumous works, to one of which, consisting of the third and fourth volumes of the 'Outlines of the Globe,' he supplied a preface containing some account of the latter days of his parent, and an eloquent tribute to his talents and virtues. He was himself one of the oldest Fellows of the Society, having been elected in 1792.

Among our FOREIGN MEMBERS we have sustained, in common with the whole world of science, a severe loss in the person of

*Augustin Pyramus DeCandolle*, a botanist of such distinguished eminence as to demand from us a more than ordinary tribute of respect. Descended from a family which came originally from Marseilles, but had for more than two centuries been settled at Geneva, and which towards the close of the sixteenth century furnished one of that illustrious band of classical printers who united in so high a degree the study of letters with the art of transmitting them to posterity, he was born in the latter city, of which his father had been Premier Syndic, on the 4th of February, 1778. His youthful inclinations were turned towards literature rather than science; but a residence in the country awakened in him a taste for botany, which his attendance on the lectures of Professor Vaucher confirmed, and at the age of sixteen his path in life was determined, and he devoted himself to the cultivation of botanical science.

In 1795 he paid his first visit to Paris, where he attended the lectures of Cuvier, Lamarck, Fourcroy, Vauquelin, and other distinguished professors; and when Geneva was a few years afterwards incorporated with the French Republic he returned to the metropolis, where he fixed his residence for several years, attending the medical classes and pursuing his botanical studies at the same time under Jussieu and Desfontaines, with both of whom he formed a close and intimate friendship. Soon after taking up his abode in Paris he commenced the publication of his '*Plantarum Historia Succulentarum*,' which was speedily followed by his '*Astragalogia*;' and in 1802 he began to furnish the text to Redouté's magnificent work, '*Les Liliacées*,' which he supplied up to the 4th volume. In 1805 he was associated with Lamarck in the third edition of that excellent naturalist's '*Flore Française*,' to which he prefixed an introduction, entitled '*Principes Élémentaires de Botanique*,' and containing the outlines of a course of lectures which he had delivered in the previous year at the Collège de France. A '*Synopsis Plantarum in Florâ Gallicâ descriptarum*' followed in 1806. He had previously, in 1804, connected his medical and botanical studies in an '*Essai sur les Propriétés Médicales des Plantes, comparées avec leur classification naturelle*,' of which a second edition appeared in 1816. At an early period of his residence in Paris M. DeCandolle took an active part in the formation, under the auspices of Baron Benjamin Delessert, of the *Société Philanthropique* for the supply of œconomical soups to the poor and other charitable purposes, of which he continued for several years to be the secretary. The Society for the Encouragement of National Industry is also stated to have been formed under his direction and management.

In 1806 he ceased to be permanently resident in Paris. He received in that year a commission from the Imperial Government to collect information on the state of botany and agriculture throughout the empire, and in pursuance of this commission he took for six successive years annual journeys into the several departments, the results of which are contained in his 'Rapports sur les Voyages Botaniques et Agronomiques faits dans les Départemens de l'Empire Français,' which were published in a collected form in 1813.

Soon after his appointment to this important task he quitted Paris for Montpellier, where he became Professor of Botany in the Faculty of Medicine in 1807, and a Chair of Botany having been established in the Faculty of Sciences of that Academy in 1810, he attached himself with renewed ardour to the promotion of his favourite pursuit. Under his direction the Botanic Garden was greatly improved, and a Catalogue, with descriptions of many new species, was published by him in 1813, in which year his 'Théorie Élémentaire de la Botanique' also made its first appearance. Many valuable memoirs, scattered through various publications, but chiefly taken from the 'Annales du Muséum d'Histoire Naturelle,' were in this year collected into a volume.

After the second Restoration of the Bourbons, circumstances occurred which induced him to quit Montpellier and return to his native city, now restored to independence. A Chair of Natural History was instituted expressly for him, of which he took possession in January 1816, and the Botanic Garden, established towards the close of the last century with the assistance of funds bequeathed for that purpose by the celebrated Bonnet, was greatly augmented, partly by assistance derived from the Government, and partly by voluntary subscription. Several Fasciculi of the 'Plantæ rares du Jardin de Genève' attest the interest which he took in its success.

In 1816 he visited England for the purpose of consulting the Herbaria of our country with a view to the general system of plants, the publication of which he then meditated, and during his stay here communicated to the Linnean Society a paper entitled "Remarks on two Genera of Plants to be referred to the Family of *Rosaceæ*." These are *Kerria* and *Purshia*, previously strangely misunderstood, and as strangely misplaced in distant and very dissimilar families. His memoir on this subject, the only one by M. DeCandolle which has a place in our 'Transactions,' is contained in the twelfth volume.

In 1818 appeared the first volume of his intended 'Regni Vegetabilis Systema Naturale,' which was followed by a second in 1821. But the plan of this work was obviously too vast for accomplishment by individual industry, however great; and after the publication of these two volumes, M. DeCandolle recognized the necessity of confining himself within narrower limits. In the year 1824 he commenced the publication of his 'Prodromus Systematis Regni Vegetabilis,' the title of which indicates his intention at some future period to resume the more extensive work. But even this 'Enumeratio Contracta,' as he designates it, proved too mighty a labour, and in the remaining seventeen years of his life, all that his unwearied energy could accomplish was the publication of seven volumes, completing pro-

bably about two-thirds of the contemplated task. The value of these important manuals, in the present state of botanical science, can only be estimated by those with whom they are of necessity in daily use. On many of the more interesting families on which they treat he simultaneously published a series of descriptive memoirs.

It is the great merit of this important work, that, far more than any other approaching it in extent, it is founded on actual observation. M. DeCandolle's own herbarium was extremely rich; he had visited and carefully examined many of the most extensive collections, and especially those of Paris; and many entire collections as well as separate families, on which he was specially engaged, were from time to time submitted to his examination by their possessors. He had thus opportunities of comparison greatly beyond what in ordinary circumstances fall to the lot of an individual. His library too was stored with almost every important publication that could be required for his undertaking. With such ample materials, aided by his untiring zeal and the persevering energy of his character, he steadily pursued his allotted task, and only ceased to labour at it when he ceased to live.

It was not merely as a botanist that M. DeCandolle deserved well of his country and of mankind. Both as an individual and in the Council of his native city, he was ever active in the promotion of measures of public utility, whether they related to the improvement of agriculture, the cultivation of the arts, the advancement of public instruction, or the amelioration of the legislative code. Even in his botanical lectures he never lost an opportunity of inculcating the importance of these and similar subjects. Those lectures were attended by a numerous class, who caught from their teacher a portion of the enthusiasm with which he was himself inspired. Some idea of the manner in which he brought their subject before his auditors may be obtained from his 'Organographie' and 'Physiologie Végétale,' published in 1827 and 1832, which contain the substance of his lectures on those two great departments of the science.

For some years his health had been declining, and it is to be feared that the severe and incessant attention which he paid to the elaboration of the great family of *Compositæ* had made a deep inroad upon it. As a relaxation from his labours, he undertook, in the last year of his life, a long journey, and attended the Scientific Meeting held at Turin; but he did not derive from this journey the anticipated improvement in his health, which gradually failed until his death, on the 9th of September last. He has left a son, Alphonse, well known as the author of several valuable botanical publications, one of which, his memoir on the family of *Myrsinæ*, appeared in our 'Transactions.'

*Jens Wilken Hornemann* was born in 1770, and studied at the University of Copenhagen, where his 'Försög til en Dansk økonomisk Plantelære' obtained a prize in 1795. In 1798 he commenced a botanical tour through Germany, France and England, and in 1801 became lecturer at the Copenhagen Botanic Garden. He succeeded his teacher Vahl as Regius Professor and Director of the Garden in

1804, and published in 1807 an 'Enumeratio Plantarum Horti Havniensis,' and in 1813 and 1815 a more complete synopsis of the plants there cultivated under the title of 'Hortus Regius Botanicus Havniensis.' In 1819 he wrote a dissertation 'De Indole Plantarum Guineensium.' After the death of Vahl he superintended the publication of the 'Flora Danica,' and several papers by him have been published in the 'Transactions of the Danish Philosophical Society' and the 'Tidskrift for Naturvidenskaberne,' of which he was one of the editors. His lectures and writings have done much to extend the study of botany in Denmark, and have contributed to maintain the character acquired for Danish botanists by Kœnig, Forskål, Ceder, Rottböll and Vahl.

Among the ASSOCIATES we lament the loss of

*The Rev. Robert Francis Bree*, who became a Fellow of the Linnean Society in 1815, and was placed on the List of Associates in 1827. He died at his residence in the New Kent Road on the 28th of January in the present year, at the age of 66.

*David Don, Esq.*, Professor of Botany in King's College, London, and Librarian of this Society, of whom an account will be found at pages 397 and 476, vol. viii.

*Mr. Charles Edward Sowerby* (son of the late James Sowerby, and brother of James De Carle and George Brettingham Sowerby, who still survive to maintain the reputation of the family name,) was principally known as a naturalist by the smaller and cheaper edition of the 'English Botany,' which he superintended and which is now nearly completed. He died on the 7th of the present month.

The President also announced that ten Fellows and three Associates had been elected since the last Anniversary.

At the Election which subsequently took place, the Lord Bishop of Norwich was elected President; Edward Forster, Esq., Treasurer; John Joseph Bennett, Esq., Secretary; and Richard Taylor, Esq., Under-Secretary. The following five Fellows were elected into the Council in the room of others going out, viz. The Right Hon. the Earl of Beverley; John Alexander Hankey, Esq.; John Miers, Esq.; Roderick Impey Murchison, Esq.; and Alfred White, Esq.

#### ENTOMOLOGY IN AMERICA.

"An Entomological Society, somewhat like your 'Club,' has lately been formed in this country. It was projected by Dr. Morris of Baltimore, and contains at present only five members, or six including me; but I am too distant from the others to be considered as a resident or immediate member. They are now at work on a Descriptive Catalogue of our native Coleoptera, which it is expected will be finished by the 1st of January, when it will probably be sent to me for revision. Mere catalogue names will not be considered as any authority; all the species which cannot be identified by works in our possession will be named and characterized as new. Many synonyms